Remarks:

Reconsideration of the application is respectfully requested.

Claims 1 - 33 are presently pending in the application. As it is believed that the claims were patentable over the cited art in their original form, the claims have not been amended to overcome the references.

Applicants gratefully acknowledge that item 4 of the above-identified Office Action indicated that claims 12 and 26 would be allowable if rewritten in independent form including all of the limitation of the base claims and any intervening claims.

In item 2 of the Office Action, claims 1 - 4, 8 - 10, 13 - 18, 22 - 24, and 27 - 33 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U. S. Patent Application Publication No. 2005/0025042 to Hadad ("**HADAD**").

In item 3 of the Office Action, claims 5 - 7, 11, 19 - 21 and 25 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over **HADAD** in view of U. S. Patent No. 6,532,338 to Burgess et al ("**BURGESS**").

Applicants respectfully traverse the above rejections.

More particularly, Applicants' claim 1 recites, among other limitations:

> at least one mobile station, data packets can be **transmitted by radio using a time slot method** between said base station and said mobile station;
>
> first means for **transmitting** a **first part** of **a data packet at a predetermined first symbol rate** and at a first transmission frequency;
>
> second means for **transmitting** a **second part** of **the data packet at a second symbol rate** and at a second transmission frequency; and
>
> **said second symbol rate differing from said predetermined first symbol rate.** [emphasis added by Applicants]1

Applicants' independent claim 32 recites similar limitations, among others.

Similarly, Applicants' independent claim 15 recites, among other limitations:

> transmitting **a first part of a data packet at a** predetermined **first symbol rate** and at a **first transmission frequency;**
>
> transmitting **a second part of the data packet at a second symbol rate** and at **a second transmission frequency;** and
>
> **the second symbol rate differing from the predetermined first symbol rate.** [emphasis added by Applicants]

As such, it can be seen that Applicants' independent claims 1, 15 and 32 require, among other limitations, that each data

packet transmitted includes a first part that is transmitted at a first symbol rate and transmission frequency, and a second part of the same data packet being transmitted at a second transmission frequency and at a second, different, symbol rate.

That Applicants' invention requires the two parts of the same packet to be transmitted at different symbol rates is supported by the specification of the instant application, for example, page 14, line 24 - page 16, line 5, which states:

> FIG. 2 shows a frame structure for a data packet P12, which can be interchanged by radio between the base station B and the mobile stations Mi in a data transmission system according to the invention. For example, let us assume that the data packets P12 are transmitted in the 2.4 GHz ISM frequency band. The FCC rules state that the transmission frequency within the frequency band must be varied after a specific time in accordance with a frequency hopping method. For this purpose, the frequency band is subdivided into frequency channels that do not overlap. The frequency located in the center of a frequency channel is referred to as the transmission frequency.
>
> At the start of the transmission of the present data packet P12, a part P1 of the data packet P12 is transmitted during a time ΔT1 at a symbol rate R1 and at a transmission frequency F1, for example from the base station B, and is received by the mobile stations Mi. The symbol rate R1 is the standard symbol rate of 1 Mbit/s. At the start of the part P1, identification information channel access code (CAC) for the pico network is transmitted in accordance with the Bluetooth Standard, after which a data packet header H1 is transmitted. The data packet header H1 may, for example, contain information about a symbol rate R2 at which a part P2 of the data packet P12 following the part P1 will be transmitted during a time ΔT2. As a rule, the part P2 is transmitted at a higher rate than

> the part P1, so that, overall, the data packet P12 is transmitted at a high data transmission rate. Since a **higher symbol rate R2** demands a wider bandwidth for the transmission frequency, a new transmission frequency F2 must be chosen for the part P2 of the data packet P12, in order to comply with the FCC requirements for non-overlapping frequency bands. [emphasis added by Applicants]

Fig. 2 of the instant application is reproduced herebelow, for convenience.

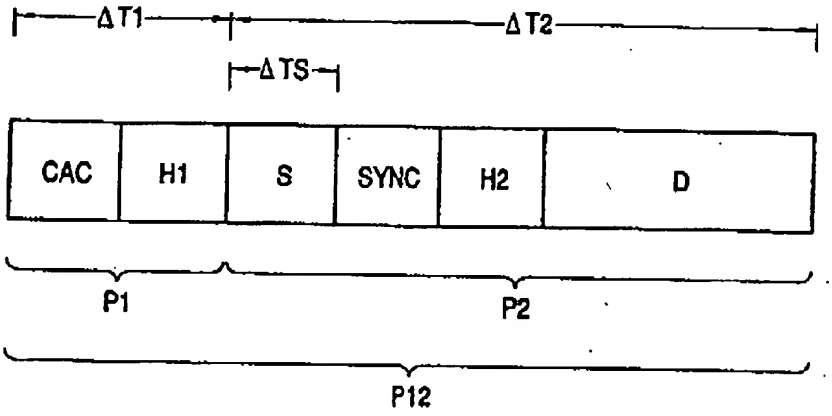

Fig. 2

The **HADAD** and **BURGESS** references fails to teach or suggest, among other limitations of the claimed invention, transmitting **a data packet in two parts, each part being transmitted at a different symbol rate than the other.**

For example, the **HADAD** reference discloses a communication system having a bi-directional communication channel. The

system disclosed in **HADAD** includes a transmitter in the subscriber units for the transmission of a signal synchronous with the guard time interval in the OFDM transmission. The receiver of **HADAD** is configured to receive the signals transmitted synchronously with the guard time interval. Such a transmission is shown in connection with Fig. 4 of **HADAD**.

However, according to the Office Action, Applicants' claim limitation of the second symbol rate differing from the first symbol rate is allegedly disclosed in paragraphs [0030]-[0033] and [0038] of **HADAD**. Applicants' respectfully disagree. Rather, paragraphs [0030] - [0033] of **HADAD** states:

> [0030] CDMA systems may use either DS/CDMA or FH/CDMA. In DS/CDMA multicode or DS/Multicode/CDMA, the separation of signals transmitted over a common channel is achieved using orthogonal codes.
>
> [0031] At present, a problem in DS/CDMA is how to generate these orthogonal codes. It is possible to have N channels using orthogonal Walsh codes to multiply each channel, **wherein each user has a different Walsh code.** In the downlink channel (DL), that is the channel from the base station to subscribers, the orthogonality is preserved, since transmission to all users is prepared and transmitted at the same time. Each user receives all the encoded messages at the same time.
>
> [0032] In the uplink, however, **each user has a different timing because of a different propagation time delay.**
>
> [0033] **Thus, each Walsh code (corresponding to a specific user) may be shifted in time relative to the other codes (that correspond to the other users).** This effect creates interference between channels. [emphasis added by Applicants]

From the foregoing cited portion of **HADAD**, it can be seen that the **complete** data packets from **each user** each include a given Walsh code. The above cited portions of **HADAD** **fail to teach or suggest** splitting **a single data packet** into two parts, each **part** being transmitted at a **different** symbol rate.

Further, paragraph [0038] of **HADAD**, states:

> [0038] Thus, Seki et al., U.S. Pat. No. 5,771,224, discloses an orthogonal frequency division multiplexing transmission system and transmitter and receiver therefor. **It transmits an OFDM transmission frame, with null symbols and reference symbols being placed in the beginning portion of the frame and QPSK symbols are placed in an information symbol data region in the frame, with equal spacing in time and frequency**. [emphasis added by Applicants]

However, **neither** the paragraph [0038] of **HADAD** (referencing U. S. Patent No. 5,771,224 to Seki et al ("**SEKI**")), nor the **SEKI** reference, itself, teaches or suggests transmitting first and second parts of **a data packet** at two **different symbol rates**, as required by Applicants' claims.

Rather, as stated in paragraph [0038] of **HADAD**, the regions of the OFDM transmission frame that include different symbols **are transmitted with equal spacing in time and frequency**. As such, the two portions of the OFDM frame of **SEKI** are

transmitted at the same symbol rate. This can additionally be seen from the SEKI reference, itself.

More particularly, SEKI (referenced in paragraph [0038] of HADAD) discloses a transmission system which permits the receiving end to demodulate multi-valued modulated symbols. Col. 7 of SEKI, lines 21 - 53, state:

> FIG. 2, which is a diagram for use in explanation of an OFDM system according to a first embodiment of the invention, shows a transmission frame format in which the number of carriers of an OFDM symbol is N (the number of effective carriers is n) and the number of OFDM symbols in one frame is M. In this embodiment, one frame is composed of NxM symbol data positions (slots) with N frequency slots arranged along the frequency axis and M time slots arranged along the time axis. At both ends of the transmission frame along the frequency axis are placed unused regions in which the carrier amplitude is set to zero.
>
> In FIG. 2, in the first time slot of the transmission frame, an OFDM symbol is transmitted in which all the carriers are zero in amplitude. This OFDM symbol is called a null symbol and used in the receiver as a reference symbol for timing synchronization. In the second time slot, a reference OFDM symbol is transmitted in which the phase and amplitude of each carrier is already known. These reference signals are used in the receiver as a synchronization reference symbol adapted to recognize the frame and as demodulation reference signals for demodulating the phase and amplitude of each carrier. In the remaining time slots including the third time slot, information symbols composed mainly of multi-valued QAM information symbols are transmitted.
>
> In and after the third OFDM symbol regions, QPSK information symbols which are regularly spaced in frequency and time as shown in FIG. 2 are placed among the multi-valued QAM information symbols. The time spacing and the frequency spacing of the QPSK symbols are determined in consideration of the coherent time

> and the coherent bandwidth of a channel. [emphasis added by Applicants]

As such, **SEKI** discloses the use of either QPSK or QAM modulation to generate the transmitted symbols. SEKI further discloses that when the modulation method is changed, the transfer rate of the bits might be changed. However, **a change of the modulation method does not necessarily imply that the symbol rate is changed.**

To the contrary, the partition of the time axis in Fig. 2 of **SEKI** (discussed in col. 7 of **SEKI**, line 21 - col. 8, line 13) shows that the length of a time interval for transmitting a symbol in **SEKI is always the same**, despite the use of different modulation methods. This shows that, in **SEKI**, the **symbol rate is always constant, despite the type of symbols** (i.e., QAM, QSPK, null or reference) **being sent.**

Fig. 2 of **SEKI** is reproduced herebelow, for convenience.

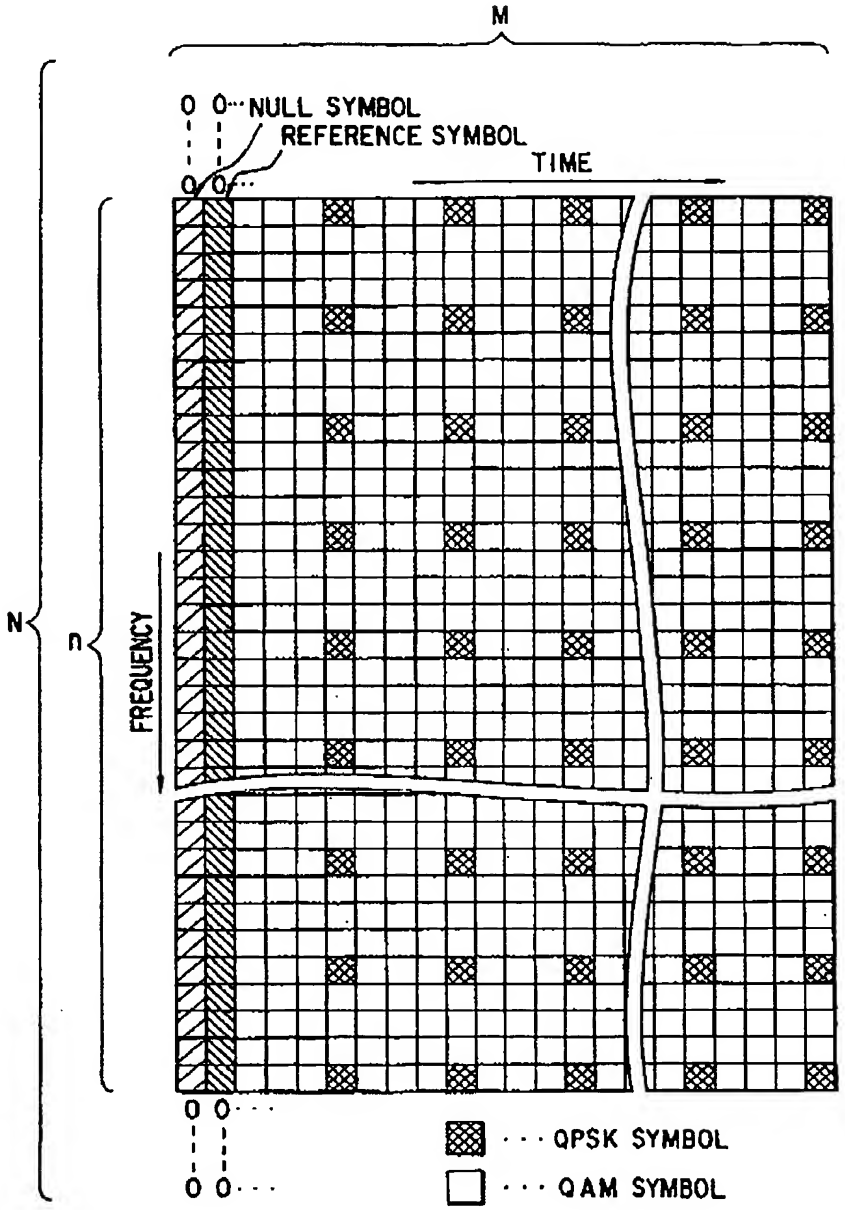

FIG. 2

As such, it can be seen from the foregoing that neither **HADAD**, nor **SEKI**, discussed in paragraph [0038] of **HADAD**, teach or suggest, among other limitations of Applicants' claims,

splitting **a single data packet** into two parts, each part being transmitted at a **different** symbol rate.

The **BURGESS** reference, cited in the Office Action in combination with **HADAD** against certain of Applicants' dependent claims, does not cure the above-discussed deficiencies of the **HADAD** reference. As such, Applicants' claims are believed to be patentable over **BURGESS** and **HADAD**, taken alone or in combination.

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 1, 15 and 32. Claims 1, 15 and 32 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 1, 15 or 32.

Finally, Applicants appreciatively acknowledge the Examiner's statement that claims 12 and 26 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." In light of the above, Applicants respectfully believe that rewriting of claims 12 and 26 is unnecessary at this time.

In view of the foregoing, reconsideration and allowance of claims 1 - 33 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner Greenberg Stemer LLP, No. 12-1099.

Respectfully submitted,

Kerry P. Sisselman
Reg. No. 37,237

For Applicants

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Lerner Greenberg Stemer LLP
Post Office Box 2480
Hollywood, FL 33022-2480
Tel: (954) 925-1100
Fax: (954) 925-1101